

CLAIMS LISTING

- 1.(currently amended) A method for coating a phosphor or a scintillator layer onto a flexible substrate, within a sealed zone maintained under vacuum conditions, by the step of vapor deposition, wherein said phosphor or scintillator layer is deposited onto said substrate in successive steps, characterized in that said substrate is deformed at least before, during or after said step of vapor deposition; further characterized by a step of applying a protective coating onto said phosphor or scintillator layer; further characterized by a step of laminating said substrate carrying the phosphor or scintillator layer onto a carrier layer wherein said carrier layer is selected from a metal sheet and a rigid polymer layer.
- 2.(original) Coating process according to claim 1, wherein said phosphor or scintillator layer is deposited onto said flexible substrate, and wherein said substrate is continuously supplied.
- 3.(original) Coating process according to claim 1, wherein said phosphor or scintillator layer is deposited onto an area of said flexible substrate, exceeding the area of a phosphor or scintillator screen, panel or plate ready-for-use by at least 50%.
- 4.(original) Coating process according to claim 2, wherein said phosphor or scintillator layer is deposited onto an area of said flexible substrate, exceeding the area of a phosphor or scintillator screen, panel or plate ready-for-use by at least 50%.
- 5.(original) Coating process according to claim 1, wherein said phosphor or scintillator layer is deposited onto an area of said flexible substrate, exceeding the area of a phosphor or scintillator screen, panel or plate ready-for-use by at least a factor of 5.

- 6.(original) Coating process according to claim 2, wherein said phosphor or scintillator layer is deposited onto an area of said flexible substrate, exceeding the area of a phosphor or scintillator screen, panel or plate ready-for-use by at least a factor of 5.
- 7.(original) Coating process according to claim 1, wherein said phosphor or scintillator layer is deposited onto an area of said flexible substrate, exceeding the area of a phosphor or scintillator screen, panel or plate ready-for-use by at least a factor of 10.
- 8.(original) Coating process according to claim 2, wherein said phosphor or scintillator layer is deposited onto an area of said flexible substrate, exceeding the area of a phosphor or scintillator screen, panel or plate ready-for-use by at least a factor of 10.
- 9.(original) Coating process according to claim 1, wherein said substrate is, at least partially, moving over one or more roller(s) and/or guiding frame(s).
- 10.(original) Coating process according to claim 2, wherein said substrate is, at least partially, moving over one or more roller(s) and/or guiding frame(s).
- 11.(original) Coating process according to claim 3, wherein said substrate is, at least partially, moving over one or more roller(s) and/or guiding frame(s).
- 12.(original) Coating process according to claim 4, wherein said substrate is, at least partially, moving over one or more roller(s) and/or guiding frame(s).
- 13.(original) Coating process according to claim 5, wherein said substrate is, at least partially, moving over one or more roller(s) and/or guiding frame(s).
- 14.(original) Coating process according to claim 6, wherein said substrate is, at least partially, moving over one or more roller(s) and/or guiding frame(s).

- 15.(original) Coating process according to claim 7, wherein said substrate is, at least partially, moving over one or more roller(s) and/or guiding frame(s).
- 16.(original) Coating process according to claim 8, wherein said substrate is, at least partially, moving over one or more roller(s) and/or guiding frame(s).
- 17.(previously presented) Coating process according to claim 1, further comprising the step of cutting said substrate carrying said deposited phosphor or scintillator layer.
- 18.(previously presented) Coating process according to claim 2, further comprising the step of cutting said substrate carrying said deposited phosphor or scintillator layer.
- 19.(previously presented) Coating process according to claim 3, further comprising the step of cutting said substrate carrying said deposited phosphor or scintillator layer.
- 20.(previously presented) Coating process according to claim 4, further comprising the step of cutting said substrate carrying said deposited phosphor or scintillator layer.
- 21.(original) Coating process according to claim 1, wherein said substrate is moving over at least one unwinding or supplying roller and/or one roll up or winding roller, wherein none, one or both of said roller(s) is(are) present outside said sealed zone.
- 22.(original) Coating process according to claim 2, wherein said substrate is moving over at least one unwinding or supplying roller and/or one roll up or winding roller, wherein none, one or both of said roller(s) is(are) present outside said sealed zone.
- 23.(original) Coating process according to claim 3, wherein said substrate is moving over at least one unwinding or supplying roller and/or one roll up or winding roller, wherein none, one or both of said roller(s) is(are) present outside said sealed zone.

- 24.(original) Coating process according to claim 4, wherein said substrate is moving over at least one unwinding or supplying roller and/or one roll up or winding roller, wherein none, one or both of said roller(s) is(are) present outside said sealed zone.
- 25.(original) Coating process according to claim 9, wherein said substrate is moving over at least one unwinding or supplying roller and/or one roll up or winding roller, wherein none, one or both of said roller(s) is(are) present outside said sealed zone.
- 26.(original) Coating process according to claim 10, wherein said substrate is moving over at least one unwinding or supplying roller and/or one roll up or winding roller, wherein none, one or both of said roller(s) is(are) present outside said sealed zone.
- 27.(original) Coating process according to claim 11, wherein said substrate is moving over at least one unwinding or supplying roller and/or one roll up or winding roller, wherein none, one or both of said roller(s) is(are) present outside said sealed zone.
- 28.(original) Coating process according to claim 12, wherein said substrate is moving over at least one unwinding or supplying roller and/or one roll up or winding roller, wherein none, one or both of said roller(s) is(are) present outside said sealed zone.
- 29.(original) Coating process according to claim 1, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 30.(original) Coating process according to claim 2, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.

- 31.(original) Coating process according to claim 3, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 32.(original) Coating process according to claim 4, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 33.(original) Coating process according to claim 9, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 34.(original) Coating process according to claim 10, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 35.(original) Coating process according to claim 11, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 36.(original) Coating process according to claim 12, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 37.(original) Coating process according to claim 21, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.

- 38.(original) Coating process according to claim 22, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 39.(original) Coating process according to claim 23, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 40.(original) Coating process according to claim 24, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 41.(original) Coating process according to claim 25, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 42.(original) Coating process according to claim 26, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 43.(original) Coating process according to claim 26, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 44.(original) Coating process according to claim 27, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.

- 45.(original) Coating process according to claim 28, wherein said flexible substrate is passing, at least once, through said coating zone by a continuous or discontinuous motion in a forward sense.
- 46.(original) Coating process according to claim 1, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.
- 47.(original) Coating process according to claim 2, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.
- 48.(original) Coating process according to claim 3, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.
- 49.(original) Coating process according to claim 4, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.
- 50.(original) Coating process according to claim 9, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.
- 51.(original) Coating process according to claim 10, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.

52.(original) Coating process according to claim 11, wherein said flexible substrate is moving
in successive steps of forward and backward motion, whether or not interrupted
inbetween said successive steps.

53.(original) Coating process according to claim 12, wherein said flexible substrate is moving
in successive steps of forward and backward motion, whether or not interrupted
inbetween said successive steps.

54.(original) Coating process according to claim 21, wherein said flexible substrate is moving
in successive steps of forward and backward motion, whether or not interrupted
inbetween said successive steps.

55.(original) Coating process according to claim 22, wherein said flexible substrate is moving
in successive steps of forward and backward motion, whether or not interrupted
inbetween said successive steps.

56.(original) Coating process according to claim 23, wherein said flexible substrate is moving
in successive steps of forward and backward motion, whether or not interrupted
inbetween said successive steps.

57.(original) Coating process according to claim 24, wherein said flexible substrate is moving
in successive steps of forward and backward motion, whether or not interrupted
inbetween said successive steps.

58.(original) Coating process according to claim 25, wherein said flexible substrate is moving
in successive steps of forward and backward motion, whether or not interrupted
inbetween said successive steps.

- 59.(original) Coating process according to claim 26, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.
- 60.(original) Coating process according to claim 27, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.
- 61.(original) Coating process according to claim 28, wherein said flexible substrate is moving in successive steps of forward and backward motion, whether or not interrupted inbetween said successive steps.
- 62.(original) Coating process according to claim 1, wherein said substrate is a self-supporting sheet, plate, web or panel.
- 63.(original) Coating process according to claim 2, wherein said substrate is a self-supporting sheet, plate, web or panel.
- 64.(original) Coating process according to claim 3, wherein said substrate is a self-supporting sheet, plate, web or panel.
- 65.(original) Coating process according to claim 4, wherein said substrate is a self-supporting sheet, plate, web or panel.
- 66.(original) Coating process according to claim 1, wherein said substrate is a roller web.
- 67.(original) Coating process according to claim 2, wherein said substrate is a roller web.
- 68.(original) Coating process according to claim 3, wherein said substrate is a roller web.
- 69.(original) Coating process according to claim 4, wherein said substrate is a roller web.

70.(original) Coating process according to claim 1, wherein said substrate is supported by a substrate holder.

71.(original) Coating process according to claim 2, wherein said substrate is supported by a substrate holder.

72.(original) Coating process according to claim 3, wherein said substrate is supported by a substrate holder.

73.(original) Coating process according to claim 4, wherein said substrate is supported by a substrate holder.

74-89.(cancelled)

90.(currently amended) Coating process according to claim ~~74~~ 1, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

91.(currently amended) Coating process according to claim ~~75~~ 2, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

92.(currently amended) Coating process according to claim ~~76~~ 3, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

93.(currently amended) Coating process according to claim ~~77~~ 4, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

94.(currently amended) Coating process according to claim ~~78~~ 62, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

95.(currently amended) Coating process according to claim ~~79~~ 63, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

96.(currently amended) Coating process according to claim ~~80~~ 64, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

97.(currently amended) Coating process according to claim ~~81~~ 65, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

98.(currently amended) Coating process according to claim ~~82~~ 66, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide

or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

99.(currently amended) Coating process according to claim ~~83~~ 67, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

100.(currently amended) Coating process according to claim ~~84~~ 68, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

101.(currently amended) Coating process according to claim ~~85~~ 69, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

102.(currently amended) Coating process according to claim ~~86~~ 70, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

103.(currently amended) Coating process according to claim ~~87~~ 71, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.

- 104.(currently amended) Coating process according to claim ~~88~~ 72, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.
- 105.(currently amended) Coating process according to claim ~~89~~ 73, wherein said metal substrate is an aluminum layer, previously coated with a protective layer being an oxide or a polymeric compound layer, present on at least a side of said substrate moving through said vapor stream.
- 106.(original) Coating process according to claim 90, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 107.(original) Coating process according to claim 91, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 108.(original) Coating process according to claim 92, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 109.(original) Coating process according to claim 93, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 110.(original) Coating process according to claim 94, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 111.(original) Coating process according to claim 95, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 112.(original) Coating process according to claim 96, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .

- 113.(original) Coating process according to claim 97, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 114.(original) Coating process according to claim 98, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 115.(original) Coating process according to claim 99, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 116.(original) Coating process according to claim 100, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 117.(original) Coating process according to claim 101, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 118.(original) Coating process according to claim 102, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 119.(original) Coating process according to claim 103, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 120.(original) Coating process according to claim 104, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 121.(original) Coating process according to claim 105, wherein said metal substrate is an anodized aluminum layer having a thickness of less than 600 μm .
- 122.(original) Coating process according to claim 1, wherein said step of vapor deposition is initiated by a vapor flow of raw materials from one or more container(s), and wherein said vapor flow is generated by adding energy to said raw materials and said container(s), by thermal, electric, or electromagnetic energy or a combination thereof.

- 123.(original) Coating process according to claim 2, wherein said step of vapor deposition is initiated by a vapor flow of raw materials from one or more container(s), and wherein said vapor flow is generated by adding energy to said raw materials and said container(s), by thermal, electric, or electromagnetic energy or a combination thereof.
- 124.(original) Coating process according to claim 3, wherein said step of vapor deposition is initiated by a vapor flow of raw materials from one or more container(s), and wherein said vapor flow is generated by adding energy to said raw materials and said container(s), by thermal, electric, or electromagnetic energy or a combination thereof.
- 125.(original) Coating process according to claim 4, wherein said step of vapor deposition is initiated by a vapor flow of raw materials from one or more container(s), and wherein said vapor flow is generated by adding energy to said raw materials and said container(s), by thermal, electric, or electromagnetic energy or a combination thereof.
- 126.(original) Coating process according to claim 1, wherein said step of vapor deposition proceeds by physical vapor deposition, by chemical vapor deposition or a by combination of physical and chemical vapor deposition.
- 127.(original) Coating process according to claim 2, wherein said step of vapor deposition proceeds by physical vapor deposition, by chemical vapor deposition or a by combination of physical and chemical vapor deposition.
- 128.(original) Coating process according to claim 3, wherein said step of vapor deposition proceeds by physical vapor deposition, by chemical vapor deposition or a by combination of physical and chemical vapor deposition.

- 129.(original) Coating process according to claim 4, wherein said step of vapor deposition proceeds by physical vapor deposition, by chemical vapor deposition or a by combination of physical and chemical vapor deposition.
- 130.(original) Coating process according to claim 1, wherein said phosphor or scintillator layer is a binderless layer.
- 131.(original) Coating process according to claim 2, wherein said phosphor or scintillator layer is a binderless layer.
- 132.(original) Coating process according to claim 3, wherein said phosphor or scintillator layer is a binderless layer.
- 133.(original) Coating process according to claim 4, wherein said phosphor or scintillator layer is a binderless layer.
- 134.(original) Coating process according to claim 1, wherein said phosphor is a photostimulable phosphor.
- 135.(original) Coating process according to claim 2, wherein said phosphor is a photostimulable phosphor.
- 136.(original) Coating process according to claim 3, wherein said phosphor is a photostimulable phosphor.
- 137.(original) Coating process according to claim 4, wherein said phosphor is a photostimulable phosphor.
- 138.(original) Coating process according to claim 134, wherein said photostimulable phosphor is a CsBr:Eu phosphor.

139.(original) Coating process according to claim 135, wherein said photostimulable phosphor is a CsBr:Eu phosphor.

140.(original) Coating process according to claim 136, wherein said photostimulable phosphor is a CsBr:Eu phosphor.

141.(original) Coating process according to claim 137, wherein said photostimulable phosphor is a CsBr:Eu phosphor.

142.(original) Coating process according to claim 1, wherein said phosphor is a prompt emitting luminescent phosphor.

143.(original) Coating process according to claim 2, wherein said phosphor is a prompt emitting luminescent phosphor.

144.(original) Coating process according to claim 3, wherein said phosphor is a prompt emitting luminescent phosphor.

145.(original) Coating process according to claim 4, wherein said phosphor is a prompt emitting luminescent phosphor.

146-149.(cancelled)

150.(currently amended) Coating process according to claim ~~146~~ 1, wherein said protective layer is coated or laminated onto said phosphor or scintillator layer inside said sealed zone, maintained under vacuum conditions.

151.(currently amended) Coating process according to claim ~~147~~ 2, wherein said protective layer is coated or laminated onto said phosphor or scintillator layer inside said sealed zone, maintained under vacuum conditions.

- 152.(currently amended) Coating process according to claim ~~148~~ 3, wherein said protective layer is coated or laminated onto said phosphor or scintillator layer inside said sealed zone, maintained under vacuum conditions.
- 153.(currently amended) Coating process according to claim ~~149~~ 4, wherein said protective layer is coated or laminated onto said phosphor or scintillator layer inside said sealed zone, maintained under vacuum conditions.
- 154.(currently amended) Coating process according to claim ~~146~~ 1, wherein said protective coating or laminate is an organic resin layer.
- 155.(currently amended) Coating process according to claim ~~147~~ 2, wherein said protective coating or laminate is an organic resin layer.
- 156.(currently amended) Coating process according to claim ~~148~~ 3, wherein said protective coating or laminate is an organic resin layer.
- 157.(currently amended) Coating process according to claim ~~149~~ 4, wherein said protective coating or laminate is an organic resin layer.
- 158.(original) Coating process according to claim 150, wherein said protective coating or laminate is an organic resin layer.
- 159.(original) Coating process according to claim 151, wherein said protective coating or laminate is an organic resin layer.
- 160.(original) Coating process according to claim 152, wherein said protective coating or laminate is an organic resin layer.
- 161.(original) Coating process according to claim 153, wherein said protective coating or laminate is an organic resin layer.

- 162.(currently amended) Coating process according to claim ~~146~~ 1, wherein said protective coating or laminate is an inorganic layer.
- 163.(currently amended) Coating process according to claim 147 2, wherein said protective coating or laminate is an inorganic layer.
- 164.(currently amended) Coating process according to claim ~~148~~ 3, wherein said protective coating or laminate is an inorganic layer.
- 165.(currently amended) Coating process according to claim ~~149~~ 4, wherein said protective coating or laminate is an inorganic layer.
- 166.(original) Coating process according to claim 150, wherein said protective coating or laminate is an inorganic layer.
- 167.(original) Coating process according to claim 151, wherein said protective coating or laminate is an inorganic layer.
- 168.(original) Coating process according to claim 152, wherein said protective coating or laminate is an inorganic layer.
- 169.(original) Coating process according to claim 153, wherein said protective coating or laminate is an inorganic layer.
- 170-197.(cancelled)
- 198.(currently amended) Coating process according to claim ~~174~~ 1, wherein said step of laminating said substrate carrying the phosphor or scintillator layer is performed inside said sealed zone, maintained under vacuum conditions.

- 199.(currently amended) Coating process according to claim ~~175~~ 2, wherein said step of laminating said substrate carrying the phosphor or scintillator layer is performed inside said sealed zone, maintained under vacuum conditions.
- 200.(currently amended) Coating process according to claim ~~176~~ 3, wherein said step of laminating said substrate carrying the phosphor or scintillator layer is performed inside said sealed zone, maintained under vacuum conditions.
- 201.(currently amended) Coating process according to claim ~~177~~ 4, wherein said step of laminating said substrate carrying the phosphor or scintillator layer is performed inside said sealed zone, maintained under vacuum conditions.
- 202-217.(cancelled)
- 218.(currently amended) Coating process according to claim ~~174~~ 1, wherein said carrier layer is a rigid metal sheet.
- 219.(currently amended) Coating process according to claim ~~175~~ 2, wherein said carrier layer is a rigid metal sheet.
- 220.(currently amended) Coating process according to claim ~~176~~ 3, wherein said carrier layer is a rigid metal sheet.
- 221.(currently amended) Coating process according to claim ~~177~~ 4, wherein said carrier layer is a rigid metal sheet.
- 222.(original) Coating process according to claim 198, wherein said carrier layer is a rigid metal sheet.
- 223.(original) Coating process according to claim 199, wherein said carrier layer is a rigid metal sheet.

224.(original) Coating process according to claim 200, wherein said carrier layer is a rigid metal sheet.

225.(original) Coating process according to claim 201, wherein said carrier layer is a rigid metal sheet.

226-228.(cancelled)